

Claim Amendments

Please amend the claims as follows:

1. (currently amended) A device comprising:

- (a) a solid component and
- (b) a liquid composition interfaced therewith, said liquid composition having a refractive-index that is substantially equal to that of said solid component, said liquid composition being selected from the group consisting of:
  - (i) saturated cyclic compounds consisting essentially of carbon and hydrogen and optionally oxygen, said saturated cyclic compounds being selected from the group consisting of oxygen substituted cyclic compounds and cyclic compounds comprising more than one ring,
  - (ii) benzene substituted with one or more fluoro groups or substituted with one or more electron-donating groups attached directly to the ring and one or of more fluoro groups attached to the ring or to the electron-donating groups, and
  - (iii) a combination comprising one or more of benzene or substituted benzene and optionally at least one of an alkane or substituted alkane having a boiling point less than about 130 °C wherein said substituted benzene is substituted with one or more fluoro groups, fluoroalkyl groups or alkoxy groups.

2. (currently amended) A device according to claim 1 wherein said liquid composition is a saturated cyclic compound comprising ~~one or~~ two rings, each having at least four atoms in the ring.

3. (currently amended) A device according to claim 1 wherein said liquid composition is benzene substituted with one or more fluoro groups or substituted with one or more electron-donating groups attached directly to the ring and one or of more fluoro groups attached to the ring or to the electron-donating groups wherein said electron-donating groups are selected from the group consisting of alkyl, alkoxy, hydroxy, and amino.

4. (currently amended) A device according to claim 1 wherein said liquid composition is the combination of part (iii) and the weight percent of benzene or substituted benzene in said combination is about 30% to about 90%.

5. (currently amended) A device according to claim 1 wherein said liquid composition is the combination of part (iii) and said alkane is substituted with an hydroxy group, an oxo group, a keto group, or an alkoxy group.

6. (original) A device comprising the device of claim 1 wherein said device comprises a groove in a substrate.

Claims 7-74 (canceled).

Please add the following new claims:

75. (new) A device according to claim 1 wherein said solid component comprises silica.

76. (new) An optical system comprising a device according to claim 1.

77. (new) An optical system according to Claim 76 wherein said solid component comprises a cavity and an optical path comprising first and second segments separated by said cavity.

78. (new) An optical system according to claim 77 further comprising control means for selectively causing said liquid composition to be disposed in said cavity between said first and second segments.

79. (new) An optical switch comprising a device according to claim 1.

80. (new) An optical switch according to claim 79 wherein said solid component comprises optical waveguides that are formed in a substrate and intersect each other and a cavity having a wall surface at a predetermined angle from the optical axis of the optical waveguide and positioned at the intersection of the optical waveguides.

81. (new) A device comprising:

- (a) a solid component and
- (b) a liquid composition interfaced therewith wherein said liquid composition is a saturated cyclic compound selected from the group consisting of oxygen substituted cyclic compounds and cyclic compounds comprising more than one ring.

82. (new) A device according to claim 81 wherein said liquid composition is a saturated cyclic compound that is an alcohol or ketone.

83. (new) A device according to claim 81 wherein said liquid composition is a saturated cyclic compound comprising two rings that are fused.

84. (new) A device according to claim 81 wherein said liquid composition is a saturated cyclic compound comprising two rings that are spiro.

85. (new) A device comprising:

- (a) a solid component and
- (b) a liquid composition interfaced therewith wherein said liquid composition is a benzene substituted with one or more fluoro groups or substituted with one or more electron-donating groups attached directly to the ring and one or more fluoro groups attached to the ring or to the electron-donating groups.

86. (new) A device according to claim 85 wherein said electron-donating groups are selected from the group consisting of alkyl, alkoxy, hydroxy, and amino.

87. (new) A device comprising:

- (a) a solid component and
- (b) a liquid composition interfaced therewith wherein said liquid composition is a combination comprising one or more of benzene or substituted benzene and at least one of an alkane or substituted alkane wherein the substituted benzene is substituted with one or more fluoro groups, fluoroalkyl groups or alkoxy groups.

88. (new) A device according to claim 87 wherein the weight percent of benzene or substituted benzene in said combination is about 30% to about 90%.

89. (new) A device according to claim 87 wherein said combination comprises substituted benzene wherein the benzene is substituted with one or more fluoro groups or fluoroalkyl groups.

90. (new) A device according to claim 87 wherein said alkane is substituted with a hydroxy group, an oxo group, a keto group, or an alkoxy group.

91. (new) A device according to claim 87 wherein said substituted benzene is selected from the group consisting of fluorinated derivatives of benzene, toluene, xylene, ethylbenzene, diethylbenzene, propylbenzene, and dipropylbenzene.

92. (new) A device according to claim 91 wherein said fluorinated derivatives thereof are selected from the group consisting of fluorobenzene, difluorobenzene, trifluorobenzene, tetrafluorobenzene, pentafluorobenzene, hexafluorobenzene, fluorotoluene, difluorotoluene, trifluoromethyltoluene, tetrafluorotoluene, and pentafluorotoluene.

93. (new) A device according to claim 87 wherein said alkane or substituted alkane of said combination is selected from the group consisting of cyclohexane, cyclopentane, hexane, pentane, butane, propane, neopentane, methylbutane, methylpropane, methanol, ethanol, 2-propanol, 1-propanol, 2-butanol, 2-methyl-2-propanol, 2-methyl-1-propanol, acetone, butanone, cyclohexanone and cyclopentanone.

94. (new) A device comprising:

- (a) a solid component and
- (b) a liquid composition interfaced therewith, said liquid composition having a refractive-index that is substantially equal to that of said solid component, said liquid composition being selected from the group consisting of liquid compositions of Table 1, liquid compositions of Table 2 and liquid compositions of Table 3.